of the cell, and causes such phenomena as nerve impulse, muscular contraction, and gland secretion.' In short all the specifically vital functions are to be explained by the postulation of * biotic energy '. One is reminded of Mr, G. B. Shaw babbling of the Life Force.

In defence of biotic energy Moore asks : ' Why, then, should a form of energy such as inhabits living structures be thought to be only a mixture of heat and electricity and chemical energy, because these are observed when it manifests itself? The position which denies the existence of a form of energy characteristic of life is one of peculiar absurdity even for the pure mechanician, which can only be explained as a natural reaction from the entirely different medieval conception of a vital force . . . it is a form of energy which arises in colloidal structures, just as magnetism appears in iron, or radioactivity in uranium or radium; and in its manifestations it undergoes exchanges with other forms of energy, in the same manner as these do amongst one another.'

But is [c] biotic energy ' really very different from the [4] vital force ' ? If we make allowance for the fact that, at the time the expression ' vital force ' came into vogue, the very modern distinction between force and energy had not been achieved, the difference is hardly appreciable.

In both cases the postulate is made in order to fill a huge gap in our understanding, our power of explaining the most distinctive phenomena of living things.

The real objection to his ' biotic energy ' escapes Moore completely. It is that energy, like force, is an

abstraction.
We observe phenomena of a given kind, and we desire to explain them. We postulate an activity in the light of our own experiences of being ourselves active and bring-ing about the changes we desire to perceive. We abstract